

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Canceled).

2. (Withdrawn) The material according to claim 19, characterized in that the carbonization takes place at a temperature greater than 800 °C, and very much preferred greater than 1000 °C.

3. (Withdrawn) The material according to claim 19, characterized by an initial first temperature treatment that at least partially softens or melts the fibres.

4. (Withdrawn) The material according to claim 19, characterized in that the flat material is fixed in a tenter frame prior to the carbonization process.

5. (Withdrawn) The material according to claim 19, characterized in that the staple fibers are suspended in a solvent, preferably water, to form a pulp and are then fibrillated.

6. (Withdrawn) The material according to claim 19, characterized in that the fibers are fibrillated in a refiner.

7. (Withdrawn) The material according to claim 19, characterized in that the pulp dilution in the refiner is approximately 0.1 to 0.01 %, preferably 0.05 to 0.02%.

8. (Withdrawn) The material according to claim 19, characterized in that a mixture of fibrillated and non-fibrillated fibers is used.

9. (Withdrawn) The material according to claim 19, characterized in that the fibrillated fibers are processed into webs with, a substance weight typically between 45 to 150g/m<sup>2</sup>.

10. (Withdrawn) The material according to claim 19, characterized in that fibers with a Titer of up to 15 dtex maximum, preferably up to 8 dtex maximum and especially preferred with a Titer of up to 3.0 dtex maximum are used.

11. (Withdrawn) The material according to claim 19, characterized in that fibers with cut lengths between 4 and 40 mm, preferably between 8 and 12 mm are used to produce the continuous web.

12. (Withdrawn) The material according to claim 19, characterized in that synthetic fibers of at least a first and a second type are used.

13. (Withdrawn) The material according to claim 19, characterized in that

the fibers of a second type contain fractions of at least one noble metal or other additive, e.g. a synthetic additive.

14. (Withdrawn) The material according to claim 19, characterized in that the calendaring is carried out at raised temperatures.

15. (Withdrawn) The material according to claim 19, characterized in that the web or material is calendared at least twice prior to the carbonization and such that all of the material is densified in a first calendaring step and at least one of the two opposite paper surfaces is changed into a film-like, porous material by melting the fibrillated fibers in a second calendaring step.

16. (Withdrawn) The material according to claim 19, characterized in that the heat and pressure are selected. such that the calendared micro porous material has pore sizes of  $< 5 \mu\text{m}$ , preferably  $< 2 \mu\text{m}$ .

17. (Withdrawn) The material according to claim 19, characterized in that synthetic fibers such as acrylic or Aramid fibers are used.

18. (Withdrawn) The material according to claim 19, characterized in that non-crystalline fibers are used as synthetic fibers.

19. (Currently Amended) A fibrous, flat and electrically conducting porous

material made of synthetic fibers, in particular synthetically spun acrylic fibers ~~(e.g. acrylic fibers)~~, said material being formed by:

first fibrillating staple fibers having preferably a specific length;

forming the fibrillated staple fibers into a continuous web in a paper manufacturing process, preferably by means of an inclined wire wet laid paper machine,

characterized in that the continuous web is calendared at least once prior to its carbonization and then carbonized/graphitized through heating at a temperature of greater than 600 °C, to obtain electrical conductivity;

said material being characterized in that the material has a core having a first porosity and at least one cover layer having a second porosity, said second porosity being less porous than the first porosity and being comprised of carbonized/graphitized polymeric fibers without the addition of carbon particles.

20. (Currently Amended) A material according to claim 19, characterized by a fibrous core and at least one micro porous flat cover layer on one side of the material that is more dense than the fibrous core. ~~region.~~

21. (Currently Amended) A material according to claim 19, characterized in that ~~that the~~ surfaces of the material ~~opposite one another~~ are micro porous flat cover layers that are more dense than the fibrous core. ~~region.~~

22. (Currently Amended) Non-woven fabric comprising carbonized/graphitized polymeric fibres characterized in that the fabric has a core having a first porosity and at least one cover layer having a second porosity, said second porosity being less porous than the first porosity and being comprised of carbonized/graphitized polymeric fibers without the addition of carbon particles.

23. (Currently Amended) Non-woven fabric according to claim 22, characterized in that the cover layer consists of fibrillated calendared and subsequently carbonized/graphitized polymeric fibers ~~the fabric consists essentially of~~ carbonized/graphitized polymeric fibres.

24. (Currently Amended) Non-woven fabric according to claim 22, characterized in that[[,]] the fabric is coated with a catalyst layer

25. (Currently Amended) Non-woven fabric according to one of characterized in that[[,]] the fabric is micro porous.

26. (Currently Amended) Non-woven fabric according to claim 22, characterized in that[[,]] the fabric is made from one single web or layer.

27. (Previously Presented) Non-woven fabric according to claim 22, characterized in that[[,]] such a fabric is made from two or more single webs and

laminated to a single web.

28. (Withdrawn) Fuel cells containing at least two gas diffusion layers separated by an ionically-electrically conducting layer separating wall (PEM membrane), said gas diffusion layers being coated with at least one catalyst. characterized in that, each gas diffusion layer is formed at least in part from a material having a fibrous core and at least one micro porous flat cover layer on one side of the material that is more dense than the fibrous region and a non-woven fabric consists essentially of carbonized/graphitized polymeric fibres.

29. (Previously Presented) Use of a material obtained according to claim 28 and a non-woven fabric comprising carbonized/graphitized polymeric fibres characterized in that the fabric has a core having a first porosity and at least one cover layer having a second porosity, said second porosity being less porous than the first porosity as a micro porous support for a membrane, in particular a PEM membrane.

30. (New) Non-woven fabric according to claim 22, characterized in that the fabric has a specific weight of typically between 45 to 150 g/m<sup>2</sup>.

31. (New) Non-woven fabric according to claim 22, characterized in that the fabric is made of fibers with a Titer of up to a maximum of 8 dtex.

32. (New) Non-woven fabric according to claim 22, characterized in that the fibres used for preparing the fabric prior to carbonisation consist of chemically different synthetic materials.

33. (New) Non-woven fabric according to claim 22, characterized in that the fabric has a pore size of  $< 5 \mu\text{m}$ .

34. (New) Non-woven fabric according to claim 22, characterized in that the fabric consists of carbonised acrylic, polyacrylate or aramid fibers.

35. (New) Non-woven fabric according to claim 34, characterized in that non-fluorinated synthetic fibres are used.

36. (New) Non-woven fabric according to claim 22, characterized in that it does not comprise any filler.

37. (New) Non-woven fabric according to claim 22, characterized in that the fabric is made from fibrillated fibres.